

Pathway to Prevention: Progress at WakeMed to Preventing Type 1 Diabetes

At [WakeMed Pediatric Endocrinology](#), we have been hard at work implementing research to help find a cure for Type 1 Diabetes.

What is Endocrinology?

Endocrinology is a specialized field of medicine that focuses on treating problems related to hormones and their actions in the body.

Since children are still growing and developing, pediatric endocrinologists often see much different problems than endocrinologists who care for adults.

Some common medical problems that pediatric endocrinologists treat include: issues related to growth, puberty, hormones and the structures that produce the hormones (glands).

How does diabetes fit into this picture?

When a person is diagnosed with diabetes, you may be wondering, "Does he or she have some sort of gland problem or hormones that aren't working correctly?"

YES!



A Type 1 Diabetes Diagnosis: What it Means

Type 1 diabetes is an autoimmune disease in which your body is unable to properly use and store glucose (a form of sugar).

An autoimmune disease occurs when a person's immune system attacks healthy cells in the body by mistake.

Type 1 diabetes, also known as "T1D", develops when the insulin-producing pancreatic beta cells are mistakenly destroyed in a person's body. Since the beta cells are attacked and destroyed, the body isn't able to produce enough insulin.

Insulin is a hormone produced and secreted by the pancreas (a gland in the back of your abdomen behind the stomach) that allows the body to use sugar from food. Blood sugar levels in a person with T1D can become dangerously high unless insulin is injected to allow the body to use the sugar.

A Type 2 Diabetes Diagnosis: What it Means

A person with Type 2 diabetes (T2D) may be able to produce some insulin, but their body isn't able to respond correctly to that naturally produced insulin.

T2D can also cause a person to have higher than normal blood sugar levels. Since someone with T2D may still have functioning beta cells that aren't being "attacked", previous medical literature has characterized T2D as a metabolic disorder, rather than an autoimmune disorder.

To ensure appropriate treatments for those affected by Type 2 diabetes, current research is working to possibly redefine it as a chronic inflammatory autoimmune disease.

For the time being, T2D is still considered a metabolic disorder.

Screening & Possible Prevention of T1D

Although we know T1D is an autoimmune disease, there is no current cure for it and it is unknown why it begins— this is where our research comes into play!

At WakeMed Pediatric Endocrinology, we are actively researching relatives of people with diagnosed T1D. Everyone who is diagnosed with Type 1 diabetes has genes in their body's DNA associated with T1D.

*The general population has a risk of 1 in 300 for T1D, but family members of T1D's have a **15x greater risk** of developing the disease.*

Since research is trying to study what happens *before* someone is diagnosed with the disease, we are trying to screen family members of T1D since there is so much of a greater risk of developing the disease for relatives of someone with T1D.



Trial Net, “Pathway to Prevention”

The research is a free-of-cost screening called Trial Net, “Pathway to Prevention”. We encourage this unique screening because it can identify the early stages of T1D *years* before any symptoms appear.

Research has shown that before someone becomes symptomatic with T1D, the body produces specific proteins, called “autoantibodies”, which signal that the pancreas is being attacked. These autoantibodies show up in the bloodstream before symptoms and eventual diagnosis of T1D occurs.

By screening relatives of someone with T1D, we can pinpoint those early autoantibodies to alert someone that they may have a risk of developing T1D and monitor for disease progress.

Additionally, if a person shows up with T1D specific autoantibodies and is not diagnosed with T1D yet, they can choose to enroll in a clinical trial to preserve beta cell function to possibly prevent the onset of diabetes. This screening allows leading physicians, academic institutions, and scientists to learn exactly how T1D develops and plan new studies exploring ways to prevent it.

Screening is free, quick, convenient and super important. Only a small blood sample is needed.

Qualifying for FREE T1D Screenings

You may qualify for a FREE risk screening if you are:

- between the ages of 1 and 45 and have a parent, brother/sister, or child with T1D and haven't been diagnosed with diabetes.

- between the ages of 1 and 20 and have an aunt/uncle, cousin, grandparent, niece/nephew, or half-brother/sister with T1D and haven't been diagnosed with diabetes.

Contact WakeMed Pediatric Endocrinology

If you or you may know someone who qualifies for Trial Net study, please contact: Sarah Sniff, research coordinator at WakeMed Pediatric Endocrinology, to set-up on appointment.

Sarah can be reached directly via email at ssniff@wakemed.org or phone at [919-350-5882](tel:919-350-5882).

Our mission is to prevent Type 1 diabetes and stop disease progression. Your participation is impactful and allows us to help those affected by Type 1 diabetes!